

# Case Study

## Bundesagentur für Arbeit



# One click away from a new job

## **Bundesagentur für Arbeit (Federal Employment Agency) as a modern service provider for the German job market**

*Pairing job seekers with companies as quickly as possible, finding work for those who have long been unemployed, offering young people a vision through an apprenticeship – the tasks of Bundesagentur für Arbeit are just as ambitious as they are challenging. The agency espouses an operational model based on streamlined processes, transparency, and rapid placement. To live up to these demands, a large-scale project entitled 'Virtueller Arbeitsmarkt' (Virtual Labour Market) was begun in 2003 in collaboration with Accenture.*

*Today this virtual job market is the largest online job portal in Germany. The powerful ELISE matching technology from WCC simplifies the placement procedure for agency employees and helps ensure efficient management processes. Job seekers benefit from practical search options and a higher proportion of matches; employers benefit from qualified applicants.*



*Bundesagentur für Arbeit (BA) sees itself as a service provider for citizens as well as for companies and institutions. In this capacity, the approximately 100,000 employees in Germany's 178 employment agencies carry out an extensive range of duties in the employment market and job training market sector. These range from career and employer consulting and job placement to the promotion of advanced professional education. BA opted for IT support early on to help manage job postings and applicant profiles. To be able to better handle new developments and challenges in the employment market, BA underwent a comprehensive reform in 2003. Following the Hartz reforms, the reorganisation of the head office and the realignment*

*of the employment agencies according to the concept 'Customer Service Centre of the Future' (KUZ) were a central component. The reform resulted in improved internal processes, increased cost effectiveness for BA and a public shift in perception towards BA as a more modern and customer-oriented service provider. In line with the new future-minded approach towards placement and consulting activities, the Internet was fully integrated into these processes, thereby replacing the approximately 20-year-old former systems.*

### **Many islands, no connections**

It was a formidable undertaking, for prior to 2003 there were only seven external systems such as the Job Information Service (Stellen-Informationen-Service), an Employer Information Service (Arbeitgeberinformationsservice) and an Apprenticeship and Training Position Information System (Ausbildungsstelleninformationssystem), as well as several specialised platforms for trainees and graduates. For operational internal processes there were two different systems to help with job placement and training position placement (coArb and COMPAS). Since the internal and external systems had no link to one another, the placement procedures became more and more complicated. For example, each office of the former Bundesanstalt für Arbeit had its own databases where the master data and profiles of job- and apprenticeship-seeking customers in the region were stored and where employers posted available positions. As a result employees of BA, who during the candidate placement process searched for open positions nationwide, had to work with a number of databases. It was not possible to compare directly. 'At that time we were certainly on par with the level of technological development. But now the job market has gotten more complex. We realised that if we wanted to be more mobile and give our customers – whether prospective employees or employers – satisfactory service, we had to come up with an integrated and, especially,



more flexible offering,' recalls Dr. Volker Rebhan, Leader SP III 12, Business Processes / Functional Architecture / JOBBÖRSE in business division Specific Products and Programmes SGB III. This was the starting point for BA's 'Virtueller Arbeitsmarkt', one of the largest e-government projects in Europe.

### **Step by step to the new system**

In cooperation with Accenture the processes of BA were analysed and the requirements for the new IT environment were formulated. 'It was obvious from the beginning to everyone involved that integrating and intelligently linking the enormous amounts of data was at the heart of the solution,' says Thomas Graff, Head of Development at Accenture. In the first phase of the project BA compiled all the information on jobs from the various online job markets in an Oracle database and standardised the external Web presence. Openings from employers and private job agents were also linked to this database via a cooperative model. All advertised positions can now be viewed with the new system at BA's portal: [www.arbeitsagentur.de](http://www.arbeitsagentur.de). In the second phase, the internal systems that job agents and consultants access for their work were replaced by VerBIS, the nationwide placement, consulting and information system. This centralised, webbased system has been serving different user groups since summer 2006 using individual, roll-based access authorisations. Thus workers at employment agencies (Arbeitslosengeld I) and consortiums as well as split sponsors (Arbeitslosengeld II) use VerBIS to find positions for, consult with, and administer their customers. VerBIS supports all central procedures and represents the entire placement and consultation process. Automating functions and shifting from paper-based to electronic communication permits employees to focus on their primary responsibilities. 'Today with 'Virtueller Arbeitsmarkt' we have at our fingertips a central database with different access authorisations for each group of people who play a role on

the labour market. But the true value comes from the matching technology,<sup>1</sup> explains Dr. Volker Rebhan. The ELISE matching engine from WCC Smart Search & Match provides for the core of the virtual labour market.

### 'Soft' search makes the difference

Unlike a typical 'hard' search which only presents those matches that fulfil all search criteria, the ELISE matching engine compares the degree of similarity between sets of data. If an employee enters, for example, the profile of an applicant with a degree in chemistry who is looking for a job in Nuremberg, he will also get back job openings asking for environmental chemists and inorganic chemists in Fürth or in a neighbouring agency's district. With one look at the list of matches he can tell how high the similarity is between the applicant profile and the job profile, expressed as a percentage, and how this is calculated. But the matching is not only carried out from one perspective; rather, the matching technology works in both directions. This means that the software looks both at how well the seeker's preferences (in the case of the applicant) match the available position, as well as how well the applicant meets the demands of the potential employer.

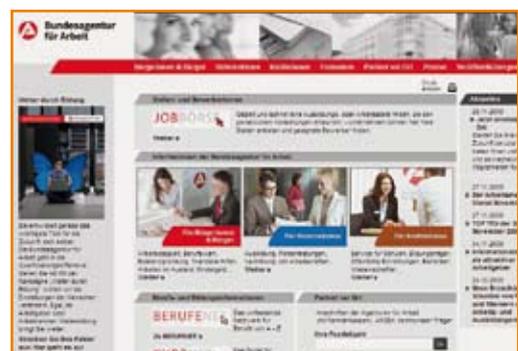
Bi-directional matching is a helpful tool especially for the customer consultants at BA. With the old system they were forced to work with various databases and 'hard' searches. Now the new matching engine delivers, in a fraction of a second, a comparison between the applicant's profile and the open positions. This saves time and accelerates the process of placing an applicant into a working position.



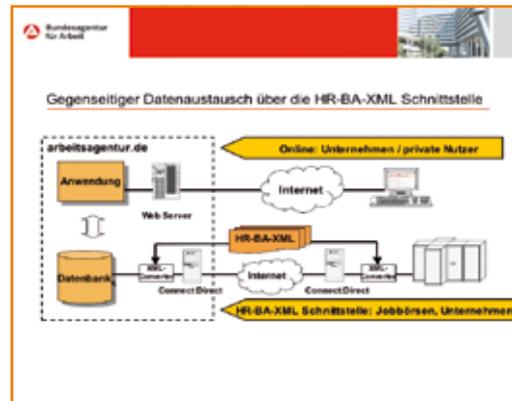
At the same time job seekers have the possibility of broadening the scope of their job applications based on the results of the 'soft' search, giving them a better chance of finding steady employment. 'At first this new search method requires a change in thinking. When performing a 'hard' search, each field in a CV is assigned a tag, for example a number that designates occupation. The employee will only get results if the field being searched for has actually been indexed. Matching, on the other hand, simulates the human thought process and uses similarities, probabilities and intelligent alternatives. Unlike a conventional search, the employee will now be shown a complete list of possible candidates,' says Michael Adam, Team SP III 12, Business Processes / Functional Architecture / JOBBÖRSE in business division Specific Products and Programmes SGB III at Bundesagentur für Arbeit. Explanatory efforts, internal schooling and a marketing campaign ensure that co-workers and customers get a feel for this new way of searching and recognise its value.

### Customer orientation consistently in focus

Bundesagentur für Arbeit considers effective cooperation with companies important. They profit, as do applicants and co-workers, from 'Virtueller Arbeitsmarkt' and its numerous services. For example, a company can use an employer account to post and manage job openings by itself. Data exchange is always safe, thanks to an encrypted connection. Through their user accounts, companies can look for suitable applicants using the many search functions available. Depending on the applicant's preference, the potential employer will receive contact information of interesting candidates directly, or he or she can use the anonymous 'Call me' function. More and more companies are even linking their own personnel system directly



to the operations of the Bundesagentur. They use the international standard HR-XML to feed open positions from around Germany into the system. Further utility is provided by the option of simultaneously announcing job openings via corresponding interfaces in the online job markets of 32 private and 14 public partners of BA. This increases the chance of filling a vacant position with



a qualified applicant quickly. Along with the customer satisfaction, both the number of users and the large number of job openings and applicant profiles attest to the success of the project.

### A highly capable IT platform

Today BA's Virtueller Arbeitsmarkt provides a platform for use all across Germany and internationally that can guarantee access to comprehensive Web- and IT-supported functionality for its customers and its 100,000 employees. Traffic on the site has multiplied since 2003 to nearly 50 million hits a day; at that time there were 19 million hits per week. Job seekers benefit from 742,000 posted jobs and training positions (as of June 2008). With around 25,000 new users registering every week and two million matches between positions and applicants, Virtueller Arbeitsmarkt has enjoyed enormous acceptance.



## Geared up for future challenges

BA does not want to sit back and relax with the success of Virtueller Arbeitsmarkt; plans for further expansion are already in the works. The ELISE matching solution can be expanded simply by adding more features. One objective is a more internationally oriented placement process. The databases across Europe are already partly networked, allowing and indeed simplifying placement of an applicant abroad. Keeping in line with the e-government mindset, there are plans to make it possible in future for an applicant facing the loss of his job, to register on the IT platform as 'already looking for new work'. This will set the placement process

*'With Virtueller Arbeitsmarkt we have realised a project that is one of a kind in Europe. Our partner and general contractor, Accenture, provided exceptionally professional assistance with designing and carrying out each phase of the project. Together with WCC's industry experience and flexibility, our team was also able to make extraordinary functionality a reality. So we look forward to the next stages in our collaboration'*

Dr. Volker Rebhan,  
Bundesagentur für Arbeit

in motion very early on. Ideally it would be possible to place the customer into a new position even before he is counted as unemployed.

Thus BA makes a significant contribution towards shaping recruitment and job placement through modern channels in a way that is more qualified, more efficient and more specific to the customer. The greater transparency with respect to job supply and applicant demand guarantees that the process of balancing out the labour and job training market is considerably accelerated. For one, the matching technology returns 'soft' search results within moments. Additionally, the immediate availability of open positions allows vacancies to be filled

more quickly and the length of unemployment to be reduced, and in an ideal situation, avoided completely. Job placement is also highly automated thanks to powerful IT. This relieves BA employees and creates space, for even better customer consultation and support.



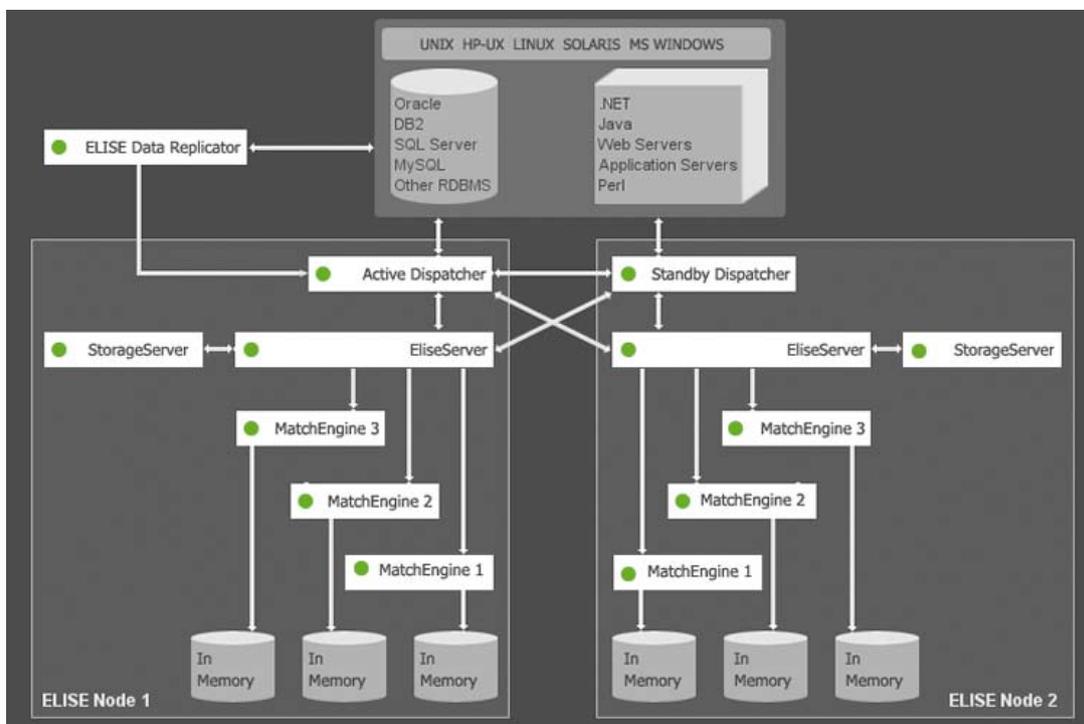
### Virtueller Arbeitsmarkt – at a glance

With the realisation of one of the largest e-government projects in Europe, BA has now positioned itself as a modern service provider for all groups active on the labour market:

- Job seekers and employers are brought together more quickly
- Exceptional transparency on vacant positions and applicants nationwide, leading to accelerated balancing of the job training and labour market
- Improved search results and more precise comparison between position and applicant using matching technology
- Simplified processes and more efficient consulting and job placement procedures in the BA
- Numerous services for companies, including:
  - Independent posting of job vacancies via an employer account
  - Establishing direct contact to suitable applicants
  - Linking of personnel systems, data exchange via HR-XML
  - Free transfer of vacant positions to BA's partners' job markets (of these, 32 job markets and 14 public partners)
  - Access to an extensive pool of applicants

## Virtueller Arbeitsmarkt – facts and figures

- Posted job and job training positions: approx. 742,000 (June 2008)
- Number of posted job and training position seekers: approx. 3.05 million (June 2008)
- Accesses to job market: approx. 10 million daily
- Accesses to the internal system VerBIS: approx. 37 million daily
- Average return time for a search:
  - VerBIS = 0.5 sec
  - Job market = 0.64 sec
- Currently 85,000 simultaneous accesses to the internal system VerBIS
- Currently 20,000 simultaneous accesses to the job market



## **About WCC**

*WCC Smart Search & Match, based in Utrecht (NL) and Washington DC (USA), was founded in 1996. The company develops intelligent matching software for companies whose business relies on matching criteria. The flagship product ELISE is searching and matching software that delivers convincing results with return times of less than a second. Many of the largest private job placement agencies, such as Adecco and Randstad, as well as public authorities and employment agencies such as the British Department of Labour rely on WCC technology. ELISE is also employed with success in the security and biometrics fields.*



## **About Accenture**

*Accenture is a globally active management consulting, technology and outsourcing service provider. As a business innovation partner, the company supports its business partners around the world – through everything from consulting and implementation to operations – with the goal of permanently turning them into 'top-performing' companies. The consulting house counts among its customers more than 4,000 organisations around the world, including 91 Fortune Global 100 companies, more than two thirds of the companies listed in the Fortune Global 500 and the most important companies presented in the Internet index magazine The Industry Standard.*

